

PART 7.

AUSTRALIAN ORCHIDS



Sarcocylus divitiflorus.

BY R. D. FITZGERALD F.L.S.

SYDNEY, N.S.W.

October, 1882

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A U S T R A L I A N O R C H I D S.

BY

R. D. FITZGERALD, F.L.S.

VOLUME I.



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SYDNEY:

THOMAS RICHARDS, GOVERNMENT PRINTER.

1882.

THIS WORK
ON THE
AUSTRALIAN ORCHIDS

Dedicated to the Memory

OF THE LATE
CHARLES DARWIN,

AS A TOKEN OF



THE VENERATION IN WHICH THAT GREAT NATURALIST AND FEARLESS EXPOUNDER OF SCIENCE IS HELD

BY

THE AUTHOR.

9 DEC 1942
Donated M. B. Peckham, Peckham Central School



SYNOPSIS.

Genus.	By whom named.	Where and when named.	Colony.	Species.	Why so named.	By whom named.	Where and when named.	Colony.	How fertilized, by insects or self.	Terrestrial or Epiphytal.	Australian Orchids.
											Vol. Page. Plate.
<i>Acianthus</i>	R. Brown	Prodromus 1810.	N.S.W., V., S.A., Q., T.	caudatus ..	Tailed, from the length of the petals and sepals.	R. Brown	Prod., 321, 1810	N.S.W., T.	Ins.	Terres.	I 7 9
<i>oxy</i> (ake) a point and <i>anthos</i> (anthos) a flower.				<i>exsertus</i>	Protruding from the bending forward of the column.	"	"	N.S.W., V., S.A., W.A., Q.	"	"	I 1 5
				<i>forniciatus</i> ..	Forked, from the form of the sepals.	"	"	N.S.W., Q.	"	"	I 1 5
<i>Adenochilus</i>	Hooker	1853	N.S.W.	Nortonii ..	Norton's, discovered by James Norton, Sydney.	Fitzgerald	Aus. Orch., Vol. I, Part 2, 1876.	N.S.W.	"	Ter. near Epiphy.	I 2 2
<i>aden</i> (adēn) a gland and <i>cheilos</i> (cheilos) a lip.											
<i>Bolbophyllum</i>	Thouars	Hist. des Plantes, Océaniques, t. 95, 1822.	N.S.W., Q.	Shepherdii ..	Shepherd's, named in honor of J. W. Shepherd, of Sydney.	Mueller	Frag., III, 40, 1862, dedicated, 1859.	N.S.W., Q.	"	Epiphy.	I 5 10
<i>bolbos</i> (bolbos) a bulb and <i>phylon</i> (phylon) a leaf.											
<i>Caladenia</i>	R. Brown	Prod., 1810.	N.S.W., V., S.A., W.A., Q., T.	<i>alba</i>	White, from the colour of the flower.	R. Brown	Prod., 323, 1810	N.S.W.	"	Terres.	I 7 1
<i>kalos</i> (kalos) beautiful and <i>aden</i> (adēn) a gland.				<i>arenaria</i>	Belonging to sand, found growing on sand-hills.	Fitzgerald	Aus. Orch., Vol. I, Part 7, 1882.	"	"	"	I 7 8
				<i>carnea</i>	Pinkish, from the colour of the flower.	R. Brown	Prod., 324, 1810	N.S.W., V., S.A., T.	"	"	I 7 1
				<i>clavigera</i>	Club-bearing, the sepals being clavate.	A. Cunningham	Lindl., Gen. and Sp. Orch., 422.	N.S.W., V., T.	"	"	I 2 3
				<i>cerulea</i>	Light-blue, from the colour of the flower.	R. Brown	Prod., 324, 1810	N.S.W., V.	"	"	I 5 8
				<i>concolor</i>	One coloured, stem and flower being red-brown.	Fitzgerald	Aus. Orch., Vol. I, Part 7, 1882.	N.S.W.	"	"	I 7 8
				<i>concullata</i> ..	Hooded, the dorsal sepal hooding the column.	"	"	"	"	"	I 2 4
				<i>deformis</i> ..	Deformed, the sepals differing in shape from other <i>Caladenias</i> (?)	R. Brown	Prod., 324, 1810	N.S.W., V., W.A., T.	"	"	I 5 8
				<i>dilatata</i>	Dilated, from the broad lobes of the labellum.	"	Prod., 325, 1810	N.S.W., W.A., S.A.	"	"	I 3 2
				<i>dimorpha</i> ..	Two-shaped, being found of two forms.	Fitzgerald	Aus. Orch., Vol. I, Part 1, 1875.	N.S.W.	"	"	I 1 3
				<i>filamentosa</i> ..	With filaments, from the long points of the sepals and petals.	R. Brown	Prod., 324, 1810	N.S.W., S.A., W.A., T.	"	"	I 7 9
				<i>tessellata</i> ..	Tessellated, the labellum being paved with calli.	Fitzgerald	Aus. Orch., Vol. I, Part 2, 1876.	N.S.W.	"	"	I 2 3
				<i>patersoni</i> ..	Tiled, from crowded calli or colour of flower (?)	R. Brown	Prod., 324, 1810	N.S.W., V., T.	"	"	I 2 4
				<i>Patersoni</i> ..	Paterson's, in honor of the collector (in Tasmania).	"	"	N.S.W., T.	"	"	I 3 2
<i>Calanthe</i>	R. Brown	Bot. Reg., 573.	N.S.W., Q.	<i>veratrifolium</i> ..	Veratrum-leaved, leaves being like those of a veratrum.	"	Bot. Reg., 573.	N.S.W., Q.	"	Ter. near Epiphy.	I 4 4
<i>kalos</i> (kalos) beautiful and <i>anthos</i> (anthos) a flower.											
<i>Caleana</i>	"	Prod., 329, 1810.	N.S.W., Q., V., W.A., T.	<i>major</i>	Larger, the larger of the New South Wales species.	"	Prod., 329, 1810	N.S.W., Q.	"	Terres.	I 6 1
after George Calcey.				<i>minor</i>	Smaller, the smaller of the New South Wales species.	"	"	N.S.W., T.	"	"	I 6 1
<i>Calochilus</i>	"	Prod., 320, 1810.	N.S.W., Q., V., T.	<i>campestris</i> ..	Dwelling in a plain, being found on plains.	"	Prod., 320, 1810	N.S.W., Q., T.	Self.	"	I 4 6
<i>kalos</i> (kalos) beautiful and <i>cheilos</i> (cheilos) a lip.				<i>jaluolous</i> ..	Marshy, being found in marshes.	"	"	N.S.W.	"	"	I 4 6
<i>Chiloglottis</i>	"	Prod., 323, 1810.	N.S.W., Q., V., T.	<i>formicifera</i> ..	Ant-bearing, from form of gland on the labellum.	Fitzgerald	Aus. Orch., Vol. I, Part 3, 1877.	"	Ins.	"	I 3 9
<i>chilos</i> (cheilos) a lip and <i>glottis</i> (glottis) a tongue.				<i>trapeziforme</i> ..	Trapezium, shaped, from the form of the labellum.	"	Aus. Orch., Vol. I, Part 3, 1877.	"	"	"	I 3 9
<i>Cleisostoma</i>	Blume	Flora Noderland Ind., 362, 1825.	N.S.W., Q.	<i>erecta</i>	Erect, from the erect habit of the plant.	"	Aus. Orch., Vol. I, Part 4, 1878.	"	"	Epiphy.	I 4 5
<i>kleios</i> (kleios) closed and <i>stoma</i> (stoma) a mouth.				<i>tridentatum</i> ..	Three-toothed, from the form of the centre lobe of the labellum (?)	Lindley	Bot. Reg., 1858	N.S.W., Q.	"	"	I 5 9
<i>Colandria</i>	Fitzgerald	Aus. Orch., Vol. I, Part 7, 1882.	Q.	<i>Smillie</i>	Smillies, in honor of Mrs. E. J. Smillie, South Australia.	Mueller	Frag., Vol. VI, 94 1867.	Q., N.A.	"	"	I 7 2
<i>kalos</i> (kalos) hollow and <i>anthos</i> (anthos) a flower.											
<i>Corysanthes</i>	R. Brown	Prod., 328, 1810.	N.S.W., Q., V., S.A., W.A., T.	<i>bicalcarata</i> ..	Two-spurred, the labellum having two spurs.	R. Brown	Prod., 325, 1810	N.S.W., Q.	"	Terres.	I 2 10
<i>korys</i> (korys) a helmet and <i>anthos</i> (anthos) a flower.				<i>fimbriata</i> ..	Fimbriated, from the fringed margins of the labellum.	"	"	N.S.W.	"	"	I 1 4
				<i>pruinosa</i>	Frosty, from the surface of the lower side of the leaf resembling hoar-frost.	A. Cunningham	Lindl., Gen. and Sp. Orch., 393.	"	"	"	I 1 4
				<i>unguiculata</i> ..	Like a little finger-nail, from the shape of the flower (?)	R. Brown	Prod., 325, 1810	"	"	"	I 2 10
<i>Cryptostylis</i>	"	Prod., 317, 1810.	N.S.W., Q., V., W.A., T.	<i>erecta</i>	Erect, the labellum being erect.	"	Prod., 317, 1810	"	"	"	I 3 8
<i>cryptos</i> (cryptos) to conceal and <i>stylis</i> (stylis) a style.				<i>leptochila</i> ..	Narrow-lipped, from the strap-shaped labellum.	Mueller	Fl. Aus., Vol. VI, 334, 1873.	"	"	"	I 3 8
<i>Cyrtostylis</i>	"	Prod., 322, 1810.	N.S.W., Q., V., S.A., W.A., T.	<i>reniformis</i> ..	Kidney-shaped, from the shape of the leaf.	R. Brown	Prod., 322, 1810	N.S.W., V., S.A., W.A., T.	"	"	I 4 8
<i>kyrtos</i> (kyrtos) curved and <i>stylis</i> (stylis) a style.											
<i>Dendrobium</i>	Swartz	Hortus Kewensis 1799.	N.S.W., Q., V., T.	<i>semulium</i> ..	Emulous, rivaling other <i>Dendrobiums</i> (?)	R. Brown	Prod., 333, 1810	N.S.W., Q.	"	Epiphy.	I 2 5
<i>dendros</i> (dendros) a tree and <i>bios</i> (bios) life.				<i>Beckleri</i>	Beckler's, after Beckler, a naturalist and collector in Australia.	Mueller	Frag., Vol. V, 95, 1866.	N.S.W.	"	"	I 7 6
				<i>canaliculatum</i> ..	Channelled, from the form of the leaf.	R. Brown	Prod., 333, 1810	Q.	"	"	I 3 6
				<i>cucumerinum</i> ..	Like a cucumber, from the form of the leaf.	" W. S. Macleay (Mueller)	"	N.S.W.	"	"	I 6 3
				<i>falconeostis</i> ..	Falcon-beaked, from the form of the labellum.	Fitzgerald	Aus. Orch., Vol. I, Part 5, 1879	"	"	"	I 5 4

Genus.	By whom named.	Where and when named.	Colony.	Species.	Why so named.	By whom named.	Where and when named.	Colony.	How fertilized, by insect or self.	Terrestrial or Epiphytal.	Australian Orchids.	Vol.	Part.	Page.
<i>Dendrobium</i> —continued.	Swartz ...	Hortus Kewensis 1799.	N.S.W., V., T.	Q. monophyllum. Moorei	One-leaved, the pseudo-bulb generally having only one leaf. Moore's, in honor of C. Moore, Director of Botanical Gardens, Sydney.	Mueller ...	Frag., Vol. I, 189, 1899.	N.S.W.	Ins...	Epiphy.	I 6 9			
				phalaenopsis	Like a butterfly, from the appearance of the flowers.	Fitzgerald ...	Gard. Chron., Vol. XIV, 38, 1889.	Q.	"	"	I 7 5			
				rigidum	Rigid, from the habit of the plant.	R. Brown	Prod., 333, 1810	Q., N.A.	"	"	I 4 7			
<i>Dipodium</i> 3is (dis) double and 3e8er (pos) of a foot.	R. Brown	Prod., 331, 1810.	N.S.W., V., S.A., T.	Q. punctatum	Spotted, the flowers being spotted with purple.	"	Prod., 331, 1810	N.S.W., V., S.A., T.	"	Ter. near Epiphy.	I 7 4			
<i>Dinria</i> 3is (dis) double and 3e8er (ura) a tail.	Smith ...	Trans. Lin. Soc., IV, 222, 1798	N.S.W., V., S.A., W.A., T.	Q. aequalis	Equal, from the equality of the three lobes of the labellum.	Mueller ...	FL. Aus., Vol. VI, 328, 1873.	N.S.W.	"	Terres.	I 2 6			
				dendroboides	Dendrobium-like, flowers being like a dendrobium.	Fitzgerald ...	Aus. Orch., Vol. I, Part 7, 1882	"	"	"	I 7 3			
				elongata	Lengthened, from the great length of the sepals.	R. Brown	Prod., 316, 1810	N.S.W., V.	"	"	I 4 9			
				maculata ...	Spotted, from the brown marks on the flowers.	Smith ...	Exot. Bot., Vol. I, 57, 4, 30.	N.S.W., V., S.A., T.	"	"	I 2 6			
				pendunculata	Penduncled, the flowers being on long pedicels.	R. Brown	Prod., 316, 1810	N.S.W., V., S.A., T.	"	"	I 7 3			
				secaudiflora	Flowers on one side, from the form of the raceme.	Fitzgerald ...	Aus. Orch., Vol. I, Part 4, 1878	N.S.W.	"	"	I 4 9			
<i>Galeola</i> galea a leather helmet.	Loureiro ..		N.S.W., V., Q.	Q. cassythoides	Cassytha-like, being like a dodder-laural.	A. Cunningham.	Lindl., Bot. Reg., 1828.	N.S.W., Q., V.	"	Ter. near Epiphy.	I 3 10			
<i>Glossodia</i> glossa (glossa) a tongue and cheilos (cheilos) like.	R. Brown	Prod., 326, 1810.		major	Larger, being the larger of the New South Wales species.	R. Brown	Prod., 326, 1810	N.S.W., V., S.A., T.	"	Terres.	I 4 2			
				minor	Smaller, the smaller species in New South Wales.	"	" 1810	N.S.W., V., S.A., T.	"	"	I 4 2			
<i>Lyperanthus</i> lyras (liparos) shining and 3e8er (anthos) a flower.	"	Prod., 323, 1810.	N.S.W., V., W.A., T.	Q. ellipticus	Elliptical, from the form of the leaves.	"	Prod., 323, 1810	N.S.W.	"	"	I 1 6			
				nigricans	Becoming black, from the plant blackening in drying.	"	"	N.S.W., V., W.A., T.	"	"	I 4 10			
				suaviolens	Sweet-scented, the flower having a sweet perfume in bright sunshine.	"	"	N.S.W., V., T.	"	"	I 4 10			
<i>Orthoceras</i> 3e8er (orthos) straight and 3e8er (ceras) a horn.	"	Prod., 317, 1810.	N.S.W., V., S.A.	Q. strictum	Contracted, from the narrow shape of the flower.	"	Prod., 317, 1810	N.S.W., V., S.A.	"	Self...	I 3 1			
<i>Prasophyllum</i> ... 3e8er (prasos) green and 3e8er (phyllon) a leaf.	"	Prod., 318, 1810.	N.S.W., Q., V., S.A., W.A., T.	Q. fimbriatum	Fimbriate, from the hairs of the labellum.	"	Prod., 319, 1810	N.S.W.	Ins...	"	I 5 1			
				flavum	Yellow, from the colour of the flower.	"	Prod., 318, 1810	N.S.W., S.A., T.	"	"	I 3 7			
				nigricans	Turning black, from the flowers blackening in drying.	"	Prod., 319, 1810	N.S.W., S.A., T.	"	"	I 5 1			
				striatum	Streaked, the flowers being streaked with purple.	"	Prod., 318, 1810	N.S.W.	"	"	I 3 7			
<i>Pterostylis</i> 3e8er (pteros) a wing and 3e8er (stylis) a column.	"	Prod., 326, 1810.	N.S.W., Q., V., S.A., W.A., T.	Q. acuminata	Acuminate, the labellum being pointed.	"	Prod., 326, 1810	"	"	"	I 5 7			
				Baptisti	Baptist's, from the name of the collector, J. Baptist.	Fitzgerald ...	Aus. Orch., Vol. I, Part 1, 1875	N.S.W., V., S.A., W.A., T.	"	"	I 1 2			
				barbata	Bearded, labellum being bearded.	Lindley ...	Orch., 388.	N.S.W., V., S.A., W.A., T.	"	"	I 7 7			
				coccinea	Red, from the colour of the flower.	Fitzgerald ...	Aus. Orch., Vol. I, Part 4, 1878	N.S.W.	"	"	I 4 3			
				concinna	Neat, from the delicate form of the plant.	R. Brown	Prod., 326, 1810	N.S.W., V.	"	"	I 6 4			
				curta	Short, from the form of the galea.	"	"	N.S.W., V., S.A., T.	"	"	I 5 6			
				cynocephala	Swan-head, the appendage to the labellum being like a swan's head.	Fitzgerald ...	Aus. Orch., Vol. I, Part 2, 1876	N.S.W.	"	"	I 2 7			
				Daintreya	Daintrey's, having been discovered by E. Daintrey, Sydney.	Mueller ...	FL. Aus., Vol. VI, 360, 1873.	"	"	"	I 6 7			
				hispidula	Rather rough, from the roughness on stem and flowers.	Fitzgerald ...	Aus. Orch., Vol. I, Part 6, 1880	N.S.W., V., S.A., T.	"	"	I 6 5			
				longifolia	Long-leaved, from the form of the leaves.	R. Brown	Prod., 327, 1810	N.S.W., V., S.A., T.	"	"	I 1 1			
				Mitchelli	Mitchell's, from the name of the discoverer, Sir Thomas Mitchell.	Lindley ...	Mitch. Trop. Aus., 365.	N.S.W., Q., V.	"	"	I 6 6			
				mutica	Changeable, being a variable plant.	R. Brown	Prod., 328, 1810	N.S.W.	"	"	I 2 7			
				nutans	Nodding, from the drooping of the flowers.	"	Prod., 327, 1810	N.S.W., Q., S.A., T.	"	"	I 6 5			
				obtus	Obtuse, from the blunt point of the labellum.	"	"	N.S.W., T.	"	"	I 6 7			
				ophioglossa	Adder-tongued, labellum being forked.	"	Prod., 326, 1810	N.S.W., Q.	"	"	I 6 4			
				parviflora	Small-flowered, from the size of the flowers.	"	Prod., 327, 1810	N.S.W., Q., V., T.	"	"	I 7 7			
				pedoglossa	Rudder-tongued, labellum being like an ancient rudder.	Fitzgerald ...	Aus. Orch., Vol. I, Part 3, 1877	N.S.W.	"	"	I 3 5			
				pedunculata	Peduncled, the flowers being on pedicels.	R. Brown	Prod., 327, 1810	N.S.W., T.	"	"	I 5 6			
				reflexa	Reflexed, from the point of the labellum being curved.	"	"	N.S.W., V., W.A.	"	"	I 5 7			
				rufa	Red, from the colour of the flower.	"	"	N.S.W.	"	"	I 2 8			
				striata	Striate, the flowers being streaked with green.	Fitzgerald ...	Aus. Orch., Vol. I, Part 3, 1877	"	"	"	I 3 5			
				squamata	Scales, from the numerous bracts on the flower-stem.	R. Brown	Prod., 327, 1810	"	"	"	I 6 6			
				truncata	Cut-short, from the truncate form of the galea.	Fitzgerald ...	Aus. Orch., Vol. I, Part 4, 1878	"	"	"	I 4 3			
				Woollii	Woolle's, from the discoverer, Dr. Woollie, Richmond.	"	Aus. Orch., Vol. I, Part 2, 1876	"	"	"	I 2 8			
<i>Saccolabium</i> sacca a sack and labium a lip.	Lindley ...		N.S.W., Q.	Q. Hillii	Hill's, from the discoverer, Walter Hill, Director of the Botanical Gardens, Brisbane.	Mueller ...	Frag., Vol. I, 192, 1859.	N.S.W., Q.	"	Epiphy.	I 2 9			
<i>Sarcocollis</i> 3e8er (sarx) flesh and cheilos (cheilos) a lip.	R. Brown	Prod., 332, 1810.	N.S.W., T., V.	Q. divitiflora	Rich-flowered, from number and beauty of the flowers.	"	FL. Aus., Vol. VI, 292, 1873.	"	"	"	I 6 10			
				falcatus	Falcate, from the sickle-form of the leaves.	R. Brown	Prod., 332, 1810	N.S.W.	"	"	I 5 3			
				Fitzgeraldii	Fitzgerald's, from the name of the discoverer, R. D. Fitzgerald, Sydney.	Mueller ...	Frag., Vol. VII, 97 and 115, 1870	"	"	"	I 3 3			
				Hillii	Hill's, in honor of W. Hill, Director of the Botanical Gardens, Brisbane.	"	Frag., Vol. II, 94, 1860.	N.S.W., Q.	"	"	I 5 5			
				montanus	Mountain, found growing on the mountains.	Fitzgerald ...	Aus. Orch., Vol. I, Part 5, 1879	N.S.W.	"	"	I 5 3			

* As observed by A. G. Hamilton, at Guntawang.

Genus.	By whom named.	Where and when named.	Colony.	Species.	Why so named.	By whom named.	Where and when named.	Colony.	How fertilised, by insects or self.	Terrestrial or epiphytal.	Australian Orchids.		
											Vol.	Part.	No. of plates.
<i>Sarcophilus</i>	R. Brown	Prod., 332, 1810.	N.S.W., T., V.	Q.	<i>olivaceus</i> ... Olive-like, leaves being like those of an olive (?)	Lindley ..	Bot. Reg., 1839, Misc. 32.	N.S.W., Q. ...	Ins...	Epiphy.	I	5	5
—continued.					<i>parviflorus</i> ... Small-flowered, probably smallest known when named.	" ..	Bot. Reg., 1838, Misc. 34.	N.S.W., V., T.	" ..	" ..	I	3	4
<i>Spathoglottis</i>	Blume ..	Bijdragen, 400, 1825	Q.	Pauline.....	Pauline's, in honor of Mrs. Pauline Richmond of Paris.	Mueller ...	Frag., Vol. VI, 30, 1867.	Q.	Self or Ins.	Ter. near Epiphy.	I	6	8
<i>Spiranthes</i>	L. C. Richard	Mém. du Muséum Paris, IV 40, 1818	N.S.W., V., T.	Q.	Australian, the species found in Australia.	R. Brown	Prod., 319, 1810	N.S.W., V., T.	Self...	Terres.	I	2	1
<i>Sprengelia</i> (spira) a screw and anther (anther) a flower	Forster ...		N.S.W., Q., V., S.A., W.A., T.		<i>carnea</i> ... Pink, from the colour of the flower.	" ..	Prod., 314, 1810	N.S.W., V., T.	" ..	" ..	I	6	2
<i>Thelymitra</i>					<i>circumsepta</i> ... Inclosed, from the wings of the column surrounding the stigma.	Fitzgerald	Aus. Orch., Vol. I, Part 4, 1878.	N.S.W.	" ..	" ..	I	4	1
<i>Thelymitra</i>					<i>longifolia</i> ... Long-leaved, from the long leaves on the flower-stem.	Forster ...	Char. Gen., 98, t. 49.	N.S.W., S.A., V., T.	" ..	" ..	I	6	2
<i>Thelymitra</i>					<i>media</i>	R. Brown	Prod., 314, 1810	N.S.W., T. ...	" ..	" ..	I	4	1
<i>Thelymitra</i>					<i>megacalyptra</i> ... Large-hooded, the hood of the column being larger than in others.	Fitzgerald	Aus. Orch., Vol. I, Part 5, 1879.	N.S.W.	Ins...	" ..	I	5	2
<i>Thelymitra</i>					<i>nuda</i> ... Naked, the central lobe of the hood being smooth.	R. Brown	Prod., 314, 1810	N.S.W., W.A.	Self...	" ..	I	5	2
<i>Thelymitra</i>					<i>pauciflora</i> ... Few-flowered, producing generally only one flower.	" ..	" ..	N.S.W., S.A., W.A.	" ..	" ..	I	6	2



SYNOPSIS OF DISTRIBUTION.

Genus.	Species.	Sub-locality.	Locality.	Colony.	Collector.	Time of flowering.	Localities recorded in the <i>Flora Australasica</i> .	Australian Orchids.		
								Vid.	Part.	No. of Plates.
<i>Acianthus</i>	<i>caudatus</i>	Hunter's Hill	Sydney	N.S.W.	Fitzgerald	August	Tasmania, J. D. Hooker	I	7	9
		Kurrajong	Blue Mountains	"	Dr. Woolls	"	"			
	<i>exsertus</i>	Pye's Creek	Sydney	"	Fitzgerald	March	Victoria, Wincee River, Robertson; Seeler's Cove, Mueller; Portarlington, Robertson	I	1	5
		Mount Wilson	Blue Mountains	"	Dr. Woolls	14 March	"			
			Parramatta	W.A.	Tepper	"	"			
			Spencer's Gulf	S.A.	Professor R. Tate	"	"			
	<i>fornicatus</i>	Hunter's Hill	Sydney	N.S.W.	Fitzgerald	Feb. and March	Queensland, Brisbane River, Mueller; Rockingham Bay, Dallachy; Mount Wheeler, Thozet	I	1	5
		Ballina	Richmond River	"	"	April	"			
			Blue Mountains	"	"	23 February	"			
		Mount Wilson	Cooyal	"	A. G. Hamilton	20 April	"			
			Guntawang	"	Bell	June to Sept.	"			
			Moruya	"	"	27 June	"			
<i>Adenochilus</i>	<i>Nortonii</i>	Mount Victoria	Blue Mountains	"	Dr. Woolls	December	"	I	2	2
		Woodford	"	"	"	"	"			
<i>Bolbophyllum</i>	<i>Shepherdii</i>	Katoomba	"	"	"	"	"			
		Redbank Creek	"	"	"	October	New South Wales, Hastings and Clarence Rivers, Beekler; Hunter River, Leichhardt; Illawarra, Shepherd	I	5	10
<i>Caladenia</i>	<i>alba</i>	Bellenden	Ker Ranges	Q.	Mueller	August	"	I	7	1
		Hunter's Hill	Sydney	N.S.W.	Fitzgerald	"	"			
		Pye's Creek	Parramatta	"	"	"	"			
		Liverpool	"	"	Canon King	25 September	"	I	7	8
	<i>arenaria</i>	Deniliquin Station	Deniliquin	"	Fitzgerald	1 October	"			
		Cunningham Plains	Bellungra	"	"	5 "	"			
		Baudesert Hills (very local)	Guntawang	"	A. G. Hamilton	Oct. to Nov.	"			
		Hunter's Hill	Sydney	"	Fitzgerald	September	New South Wales, Richmond River, Henderson; New England, C. Stuart; Twofold Bay, Mueller; Queensland, Koppell and Shoalwater Bays, R. Brown; Brisbane to Wide Bay, Leichhardt and Mueller; Rockhampton, O'Shannessy; Nerkes Creek, Bowman; Darling Downs, Law; Mount Elliott, Fitzalan. Victoria, Glenelg to Gippsland, Mueller and Robertson. South Australia, Glenelg to St. Vincent's Gulf, Mueller; Kangaroo Island, Waterhouse. Tasmania generally, J. D. Hooker	I	7	1
	<i>carnea</i>	Pye's Creek	Parramatta	"	"	"	"			
		Mount Wilson	Coatamundra	"	"	25 October	"			
		Deniliquin Station	Deniliquin	"	"	23 August	"			
		Cunningham Plains	Bellungra	"	"	25 September	"			
		Mount Lofty Range	Murrumburrah	"	"	1 October	"			
			Adelaide	S.A.	"	2 "	"			
			Hobart	T.	F. J. Paterson	24 "	"			
				"	"	3 November	"			
	<i>clavigera</i>	Bellungra	N.S.W.	Fitzgerald	"	1 October	New South Wales, Bathurst, A. Cunningham; Victoria, Ballarat, Glendinning, Malden, Mrs. Nott. Tasmania, Circular Head, Gunn; Tasman River, Archer; Flinders Island, Milligan	I	2	3
		Baudesert Hills	Guntawang	"	A. G. Hamilton	Sept. to October	"			
		Mudgee	"	"	Dr. Woolls	"	"			
		Reedy Creek	Jugiong	"	G. Sheaffe	28 September	"			
			Yass	"	C. Jenkins	9 October	"			
			Hobart	T.	F. J. Paterson	3 November	"			
	<i>corulca</i>	Hunter's Hill	Sydney	N.S.W.	Fitzgerald	23 August	New South Wales, New England, C. Stuart; Twofold Bay, Mueller. Victoria, north of Wombeyne River.	I	5	8
			Guntawang	"	"	Aug. to Oct.	"			
			Liverpool	"	Canon King	"	"			
			Parramatta	"	Dr. Woolls	"	"			
		Murray River	To S. A. boundary	V.	Nancarrow (Mueller)	"	"			
			Albury	N.S.W.	Wood	10 October	"	I	7	8
	<i>concolor</i>		Molong	"	Dr. Ross	20 "	"	I	2	4
	<i>cucullata</i>		Borowra	"	G. Sheaffe	30 "	"			
			Guntawang	"	A. G. Hamilton	13 "	"			
		Biraganbil Hills (very local)	Guntawang	"	"	"	"			
	<i>deformis</i>		Coatamundra	"	Fitzgerald	23 August	New South Wales, Albury, Beattie. Victoria, Portland, Allitt; Port Phillip, Gunn and Adamson; Mangatia Range and Geena River, Mueller; Ararat, Green; Burra Burra, Hinteracker. Tasmania generally, J. D. Hooker; Port Dalrymple, K. Brown; Flinders Island, Milligan; South Australia, the Murray to St. Vincent's Gulf, Mueller; York Peninsula, Fowler; Dis-cuit Flat, Schulzen	I	5	8
			Borowra	"	G. Sheaffe	20 September	"			
		Cunningham Plains	Murrumburrah	"	D. H. Campbell	15 "	"			
		Malogany Creek	York	W.A.	Fitzgerald	26 August	"			
				"	"	"	"			
				"	"	"	"			
				"	"	"	"			
				"	"	"	"			
	<i>dilatata</i>	Hunter's Hill	Sydney	N.S.W.	"	October	"	I	3	2
		Round Swamp	Urana	"	"	24 August	"			
		Cunningham Plains	Murrumburrah	"	A. G. Hamilton	2 October	"			
			Guntawang	"	Dr. Ross	Sept. to Nov.	"			
			Molong	"	"	November	"			
			Borowra	"	G. Sheaffe	3 October	"			
			Banbury	W.A.	Fitzgerald	September	"			
			Adelaide	S.A.	"	24 October	"			
	<i>dimorpha</i>	Mount Lofty	Bowenfels	N.S.W.	"	October	"	I	1	3
		Mount Wilson	Blue Mountains	"	"	25 "	"			
			"	"	"	1 September	"			
			"	"	"	6 October	"			
	<i>filamentosa</i>		Bowral	"	G. Sheaffe	October	Tasmania, Port Dalrymple, Paterson and R. Brown; George Town, Archer; Southport, C. Stuart. Western Australia, Rivoli Bay, Mueller.	I	7	9
			Borowra	"	"	10 September	"			
			Warrah	"	E. Mercwether	15 September	"			
			Guntawang	"	A. G. Hamilton	Aug. to Sept.	"			
			Perth	W.A.	Fitzgerald	July	"			
			Gearlton	"	"	August	"			
			Adelaide	S.A.	Prof. R. Tate	September	"	I	2	3
			Sydney	N.S.W.	Fitzgerald	15 "	"			
	<i>tesellata</i>		Borowra	"	G. Sheaffe	25 October	Victoria, Port Phillip, Gunn; Tasmania, Port Dalrymple, R. Brown; South Port, C. Stuart.	I	2	4
			Murrumburrah	"	"	25 October	"			
			Borowra	"	"	"	"			
			Sydney	"	Fitzgerald	"	"			
	<i>testacea</i>	Hunter's Hill	Blue Mountains	"	"	25 August	Tasmania, Port Dalrymple, Paterson	I	3	2
		Mount Wilson	"	"	"	20 October	"			
			"	"	"	"	"			
			"	"	"	"	"			
	<i>Patersoni</i>		Bellungra	"	Fitzgerald	January	Queensland, Rockingham Bay, Dallachy; Brisbane River, Mueller.	I	4	4
			Borowra	"	G. Sheaffe	December	"			
			Kempsey	"	"	"	"			
			Illawarra	"	"	"	"			
<i>Calanthe</i>	<i>veratrifolium</i>	Macleay River	"	"	Fitzgerald	"	"			
		Bali Pass	"	"	"	"	"			
		Bellinger River	"	"	"	"	"			
		Cudgen	Tweed River	"	"	20 "	"			

Genus.	Species.	Sub-locality.	Locality.	Colony.	Collector.	Time of flowering.	Localities recorded in the <i>Flore Australiæ</i> .	Australian Orchids.		
								Vol.	Part.	No. of Plate.
<i>Calanthe</i>	<i>veratrifolium</i>	Richmond River	Ballina	N.S.W.	Fitzgerald	November				
	<i>continua</i>	Hastings River	Port Macquarie	"	"	December				
<i>Calceana</i>	<i>major</i>	Hunter's Hill	Conjola	"	G. Sheaffe	5 January				
		Mount Wilson	Kurrajong	"	Dr. Woolls	4 "				
		Katoomba	Blue Mountains	"	Fitzgerald	Oct. and Nov.	<i>New South Wales</i> , New England, C. Stuart;	I	6	1
		Woodford	"	"	"	22 December	<i>Queensland</i> , Moreton Bay, Mueller; <i>Victoria</i> , Mount Sturgeon, Mount Abrupt and Latrobe River, Mueller; Mount William, Sullivan; Gippsland, Walter. <i>Tasmania</i> , Rocky Cape, Gunn; Cheshunt, Archer; Southport, C. Stuart; South Huon, Oldfield; N. W. Bay, Milligan.			
	<i>minor</i>	Hunter's Hill	Sydney	N.S.W.	Fitzgerald	4 January				
		Biraganbil (very rare)	Lithgow	"	Wilkinson	17 December				
			Guntawang	"	A. G. Hamilton	November	<i>Tasmania</i> , Hobart, Gunn	I	6	1
<i>Calochilus</i>	<i>campestris</i>	Hunter's Hill	Sydney	"	Fitzgerald	October	<i>Tasmania</i> , Rocky Cape and Woolnorth, Gunn; Port Sorell, Archer; Huon River, Oldfield; Oyster Cove, Milligan; South Port, C. Stuart. <i>Queensland</i> , Shoalwater Bay, R. Brown	I	4	6
		Mount Wilson	Blue Mountains	"	"	25 "				
			Boorowa	"	Wilkinson	27 "				
			Norwa	"	Sheaffe	31 "				
			Guntawang	"	"	1 September				
			Hobart	"	A. G. Hamilton	September				
			Condamine River	N.S.W.	E. J. Paterson	26 November				
	<i>paludosus</i>	Hunter's Hill	Sydney	"	C. Hartmann (Mueller)	October	<i>New South Wales</i> , Hunter River, R. Brown	I	4	6
		Mount Wilson	Newcastle	"	Fitzgerald	25 "				
<i>Chiloglottis</i>	<i>formicifera</i>		Kurrajong	"	E. Merewether	29 August				
			Liverpool	"	Fitzgerald	5 September				
	<i>trapeziforme</i>			"	Canon King	4 September				
			Bowral	"	"	6 "				
			Guntawang	"	G. Sheaffe	September				
			Howe's Island	"	A. G. Hamilton	December	<i>New South Wales</i> , Hastings and Clarence Rivers, Beckler; New England, C. Stuart; <i>Queensland</i> , Brisbane River, Hill and Bailey; Wide Bay, Leichhardt	I	4	5
			Macleay River	"	Fitzgerald	November				
			Illawarra	"	"	December				
			Broken Bay	"	"	20 November				
			Pictou	"	"	2 December				
			Bowral	"	G. Sheaffe	10 "				
			Mount Dromedary	"	Miss M. Bate (Mueller)	"				
		Bent's Basin	Nepesin River	"	Dr. Woolls	1 December				
			Towomba	Q.	C. Hartmann (Mueller)	10 July	<i>Queensland</i> , Rockingham Bay, Dallashy	I	7	2
<i>Coclandria</i>	<i>Smillies</i>		Possession Isld.	"	Captain Broomfield	16 October	<i>Queensland</i> , Rockingham Bay, Dallashy	I	7	2
			Torres Straits	"	Sir W. Macarthur	16 October				
			Cairns	"	W. Hill (Mueller)	3 "				
<i>Corysanthes</i>	<i>bicalcarata</i>	Hunter's Hill	Sydney	N.S.W.	Fitzgerald	June	<i>Queensland</i> , Brisbane River, Hill; Rockhampton, Thozet	I	2	10
			Kurrajong	"	"	10 "				
			Richmond River	"	"	9 May				
			Blue Mountains	"	W. S. Campbell	3 "				
			Parramatta	"	Dr. Woolls	June				
	<i>fimbriata</i>	Hunter's Hill	Sydney	"	Fitzgerald	June				
		Redbank Creek	Broken Bay	"	"	June				
		Pittwater	Yass	"	"	8 September				
	<i>fimbriata</i>	Hunter's Hill	Sydney	"	S. A. Fox	June				
			Moruya	"	Fitzgerald	27 June				
	<i>pruinosa</i>	Hunter's Hill	Stroud	"	R. W. Thompson	30 September				
			Sydney	"	Fitzgerald	July				
	<i>unguiculata</i>	Hunter's Hill	"	"	"	20 July				
		Lane Cove	"	"	"	December				
		Long Bay	"	"	"	10 December				
<i>Cryptostylis</i>	<i>erecta</i>	Hunter's Hill	Newcastle	"	E. Merewether	14 November				
		Mount Wilson	Blue Mountains	"	Fitzgerald	20 December	<i>New South Wales</i> , Springwood, R. Cunningham; Kurrajong, Mrs. Calvert.	I	3	8
	<i>leptochila</i>	Mount Tomah	"	"	"	10 "				
		Mount Wilson	Mittagong	"	"	2 January				
			Moruya	"	G. Sheaffe	1 December				
	<i>reniformis</i>	Hunter's Hill	Sydney	"	Fitzgerald	10 July	<i>New South Wales</i> , Twoold Bay, Mueller.	I	4	8
		Redbank Creek	Pictou	"	"	10 July	<i>Tasmania</i> (generally), J. D. Hooker. <i>Victoria</i> , Wenda Vale, Robertson; Portland, Allitt; Station Peak, Mueller. <i>South Australia</i> , Encounter Bay, Mueller. <i>Western Australia</i> , Vain River, Oldfield. Rottenest Island, Preiss.			
		Mount Melville	Guntawang	"	A. G. Hamilton	September				
		St. Werburghs	Hay River	W.A.	Fitzgerald	13 July to 20 Sep.				
		Fresh-water Bay	Perth	"	"	September				
			Freemantle	"	"	August				
<i>Dendrobium</i>	<i>semulatum</i>	Mount Lofly	Adelaide	S.A.	"	October				
		Macleay River	Kempsey	N.S.W.	"	September	<i>New South Wales</i> , New England, C. Stuart; Hastings River, Beckler; Richmond River, Henderson; <i>Queensland</i> , Brisbane River, Bailey.	I	2	5
		Cudgen	Tweed River	"	"	2 October				
		Wallis Creek	M'Lean River	"	"	September				
			Lake Macquarie	"	"	"				
		Cedar Creek	Pictou	"	"	"				
		The Basin	Pitt Water	"	"	"				
		Mount Wilson	Blue Mountains	"	"	"				
			Mount Dromedary	"	Miss M. Bate (Mueller)	"				
			Parramatta	"	Dr. Woolls	"				
			Towomba	Q.	C. Hartmann (Mueller)	"				
	<i>Beckleri</i>	Clybucca Creek	Trinity Bay	"	W. Hill (Mueller)	November	<i>New South Wales</i> , New England, C. Stuart.	I	7	6
			Macleay River	N.S.W.	Fitzgerald	"				
			Bellinger River	"	"	"				
			Port Macquarie	"	"	"				
	<i>canaliculatum</i>	Hastings River	Rockingham Bay	Q.	Carron	"	<i>Queensland</i> , Endeavour River, Banks and Solander.	I	3	6
			"	"	"	"				
	<i>cucumerinum</i>	Camden Park	Camden	N.S.W.	Fitzgerald	"				
		Stonquarry Creek	Pictou	"	"	"				
		Brownlow Hill	Camden	"	Dr. Woolls	"				
			Towomba	Q.	C. Hartmann (Mueller)	"				
	<i>falconeotis</i>	Mount Banda Banda	Macleay River	N.S.W.	Fitzgerald	"				
	<i>monophyllum</i>	Cudgen	Tweed River	"	"	March	<i>New South Wales</i> , Clarence River, Beckler. <i>Queensland</i> , Brisbane River, A. Cunningham and W. Hill; Glasshouse Mountains, Bryerley	I	6	9
		Richmond River	Ballina	"	"	"				
	<i>Moorei</i>	Mount Gower	Howes Island	"	"	April to Aug.				
	<i>phalaenopsis</i>		Cairns	Q.	Captain Broomfield	"				
	<i>rigidum</i>		Rockingham Bay	"	F. Bailey (Mueller)	January	<i>Queensland</i> , Endeavour River, Banks and Solander	I	7	5
				"	"	"				
			Daintree River	"	W. Hill (Mueller)	"				
<i>Dipodium</i>	<i>punctatum</i>	Hunter's Hill	Sydney	N.S.W.	Fitzgerald	December	<i>New South Wales</i> , Hastings and Clarence, Beckler; New England, C. Stuart, Armadale, Perrott. <i>Queensland</i> , Brisbane River, Mueller; Condamine River, Leichhardt; Rockhampton, O'Shaney; Barklee River and Mount Elliott, Fitzalan. <i>Victoria</i> , Upper Yarra and Dandenong Range, Mueller; Glenelg River, Robertson. <i>Tasmania</i> , Circular Head, Gunn; Port Sorell and Cheshunt, Archer	I	7	4
		Mount Wilson	Blue Mountains	"	E. Merewether	11 January				
			Richmond	"	Dr. Woolls (after a drought)	28 May				
			Parramatta	"	Dr. Woolls	"				
		Mount Lofly	Adelaide	S.A.	Driffield	9 January				
	<i>(squamatum ?)</i>		Guntawang	N.S.W.	A. G. Hamilton	Nov. to Jan.				
<i>Diuris</i>	<i>aqualis</i>		Liverpool	"	Fitzgerald	November	<i>New South Wales</i> , Richards, M'Arthur	I	2	6
			Merimbula	"	Brown	September				

SYNOPSIS OF DISTRIBUTION—continued.

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* With smooth labellum.

Genus.	Species.	Sub-locality.	Locality.	Colony.	Collector.	Time of flowering.	Localities recorded in the <i>Flora Australiensis</i> .	Australian Orchids.		
								Vol.	Part.	No. of Plate.
<i>Sarcocollis</i> <i>continuel.</i>	<i>olivacea</i> ...	Yarraba	Macleay River Mount Dromedary	N.S.W. "	Fitzgerald Miss M. Bate (Mueller)	November .....	.....		
	<i>parviflorus</i> ..	Redbank Creek	Pieton	"	Fitzgerald	October	Victoria, Apollo Bay, Mueller; Dandenong Range, Taylor; <i>Tasmania</i> , Emu Bay, Black River, Circular Head, Great Swanport, Gunn and Milligan.	I	3	4
<i>Spathoglottis</i> ...	<i>Panline</i> ...	Hunter's Hill	Sydney	"	"	November .....	.....		
	.....	New Port	Pitt Water .....	" .....	" .....	" .....	.....		
<i>Spiranthes</i> ...	<i>Australis</i> ...	Mount Tomah	Blue Mountains .....	" .....	" .....	" .....	.....		
	.....	Fern-tree Gully	Melbourne	V.	Dr. Currie (Mueller)	February	Queensland, Rockingham Bay, Dallsahy	I	6	8
<i>Thelymitra</i>	<i>carnea</i>	Cape Sidmouth	Cape Graville	N.S.W.	Ready (Mueller)	March .....	.....	I	2	1
	.....	Sydney	Bellinger River	"	Fitzgerald .....	.....	.....	
<i>Thelymitra</i>	<i>carnea</i>	Lake George	Lake George .....	" .....	" .....	.....	.....	
	.....	Macleay River	Macleay River .....	" .....	" .....	.....	.....	
<i>Thelymitra</i>	<i>carnea</i>	Bowenfels	Bowenfels	N.S.W.	Wilkinson	22 .....	.....		
	.....	Alps	Alps	N.S.W.	Mueller .....	.....	.....	
<i>Thelymitra</i>	<i>carnea</i>	Condamine River	Condamine River	Q.	C. Hartmann (Mueller)	September .....	.....	I	6	2
	.....	Sydney	Sydney	N.S.W.	Fitzgerald .....	.....	.....	
<i>Thelymitra</i>	<i>carnea</i>	Liverpool	Liverpool .....	" .....	" .....	.....	.....	
	.....	Pitt Water	Pitt Water .....	" .....	" .....	.....	.....	
<i>Thelymitra</i>	<i>carnea</i>	Blue Mountains	Blue Mountains	"	"	25 October .....	.....		
	.....	Mount Wilson	Mount Wilson .....	" .....	" .....	.....	.....	
<i>Thelymitra</i>	<i>circumsepta</i> ..	Parramatta	Parramatta	"	Dr. Woolls .....	.....	.....	
	<i>longifolia</i> ...	Blue Mountains	Blue Mountains	"	Fitzgerald	December .....	.....	I	4	1
<i>Thelymitra</i>	<i>circumsepta</i> ..	Sydney	Sydney .....	" .....	" .....	.....	.....	I	6	2
	<i>longifolia</i> ...	Hunter's Hill	Hunter's Hill .....	" .....	" .....	.....	.....	
<i>Thelymitra</i>	<i>circumsepta</i> ..	Bethunga	Bethunga .....	" .....	" .....	.....	.....	
	<i>longifolia</i> ...	Lithgow	Lithgow	"	Wilkinson	1 October .....	.....		
<i>Thelymitra</i>	<i>circumsepta</i> ..	Guntawang	Guntawang	"	A. G. Hamilton	6 November .....	.....		
	<i>longifolia</i> ...	Adelaide	Adelaide	S.A.	Fitzgerald	Sept. & Oct. 24 October .....	.....		
<i>Thelymitra</i>	<i>media</i>	Mount Lefty	Mount Lefty .....	" .....	" .....	.....	.....	
	.....	Hunter's Hill	Hunter's Hill	N.S.W.	"	October .....	.....	I	4	1
<i>Thelymitra</i>	<i>megalyptra</i> ..	Deniliquin	Deniliquin	N.S.W.	(T. ixionides of Hooker) .....	.....	.....	
	.....	Guntawang	Guntawang	"	Fitzgerald	25 September .....	.....	I	5	2
<i>Thelymitra</i>	<i>megalyptra</i> ..	Boorowa	Boorowa	"	A. G. Hamilton	Sept. to Oct. 30 October .....	.....		
	.....	Yass	Yass	"	G. Sheaffe .....	.....	.....	
<i>Thelymitra</i>	<i>nuda</i>	Sydney	Sydney	"	C. Jenkins	9 October .....	.....	I	5	2
	.....	Albany	Albany	W.A.	Fitzgerald	September .....	.....		
<i>Thelymitra</i>	<i>nuda</i>	Marlborough	Marlborough	"	"	20 .....	.....		
	.....	Wilson's Inlet	Wilson's Inlet	"	"	20 .....	.....		
<i>Thelymitra</i>	<i>nuda</i>	St. Werburgh	St. Werburgh	"	"	8 October .....	.....		
	.....	The Bows	The Bows	"	"	25 August .....	.....		
<i>Thelymitra</i>	<i>pauciflora</i> ...	Mount Lefty	Mount Lefty	"	"	24 October .....	.....	I	6	2
	.....	Hunter's Hill	Hunter's Hill	N.S.W.	"	23 September .....	.....		
<i>Thelymitra</i>	<i>pauciflora</i> ...	Mount Wilson	Mount Wilson	"	"	25 October .....	.....		
	.....	Adelaide	Adelaide	S.A.	"	24 .....	.....		
<i>Thelymitra</i>	<i>pauciflora</i> ...	Albany	Albany	W.A.	"	20 September			
	"	"			



From Nature and on Stone by R.D. Fitzgerald F.L.S.

Carnea

CALADENIA

Alba

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November 1880.



Caladenia alba. (R. Brown.) *Caladenia carnea.* (R. Brown.)

THESE plants afford a good illustration of a question that has often suggested itself to me in the examination of orchids, and one equally applicable to other orders,—whether there are not varieties or species (hardly recognized even as varieties) that are in reality as distinct from each other as the most unquestioned species; but from their departure from each other being of a constitutional character (not to be marked by a bract or a gland) are overlooked or disregarded. In support of this suggestion of innate distinctness, I may here give the result of a long series of experiments in the hybridization of Hibiscus. No botanist has, I believe, ever thought of including *H. divaricatus*, *H. heterophyllus*, *H. splendens*, and *H. Fitzgeraldi*, in one species, yet they are crossed freely and the offspring are fertile with the original plants and amongst themselves, with no apparent tendency to sterility or relapse to either parent, at least so far as I have been able to test them, that is, to the fifth generation. All attempts, however, to cross any of them with *H. diversifolius*, *H. mutabilis*, or *H. manihot*, or the latter amongst themselves, has been without success. The reason I believe to be that they have a constitutional characteristic (quite as marked in its way as any outward specific distinction) of repugnance to other species, which may possibly lie in the pollen and be consequently inappreciable. A further illustration of innate distinction that cannot be found in dried specimens is afforded by the hybrids between *H. splendens* and *H. Fitzgeraldi*. *H. splendens* flowers early in the morning; *H. Fitzgeraldi*, in the evening; the hybrids in the middle of the day. Thus marking the force of an externally inappreciable distinction. In the case of *Caladenia alba* and *C. carnea*, it would I think be impossible to describe positively the difference between them, yet I believe them to be as distinct as many recognized species, and I do not think that I should ever pick the one in mistake for the other. The only distinction of a specific character however, that appears to be constant, is that the labellum is broader and does not clasp the column to the same extent in *C. alba* as in *C. carnea*. There is, however, a constitutional difference in their time of flowering, *C. alba* being always before *C. carnea*, and the general distinctions are that *C. alba* is white, though sometimes pink; that *C. carnea* is pink, though perhaps sometimes white; that *C. alba* is the larger flower, and that its column is not generally marked or at least barred, though sometimes blotched, and the same may be said of the labellum. Such cases as this deserve more consideration than they generally receive, for who can say whether *C. alba* is a variety or a species? Yet here, if anywhere, and in the thousands of doubtful species (in great part for convenience and to escape the difficulties of determination) called varieties, and to be found in almost every genus, rests the fulcrum of the Darwinian theory, and the proof or otherwise of change so often demanded by its opponents.

On one occasion I had the pleasure of seeing *Caladenia alba* actually fertilized by an insect. A flower was observed to tremble, and on examination it was found that a fly had alighted upon its labellum, was by its spring carried against the stigma and adhering to it struggled violently to escape, and thereby withdrew the pollen-masses from the anther and smeared them over the stigma. This instance, in my opinion, goes far to show that though the pollinia in this and many other species may, without fertilizing the flower, be easily removed by touching the disc or discs with the point of a pin, the operation is not by any means so neatly performed by an entrapped insect, and the consequence is that the flowers are impregnated by their own pollen.

C. alba flowers in August, and is to be found in shady forests generally, on moderately good soil.

C. carnea flowers in September, and is often to be procured on barren hill-tops and in the crevices of rocks, as well as in open forests.

EXPLANATION OF PLATE.

Caladenia carnea. Fig. 1. Labellum, from the front and back. 2. Column, from back, side, and front. 3. Column and labellum, from the side. 4. Pollen-masses, from the edges. 5. Pollen-masses.

Caladenia alba. Fig. 1. Column, from the front. 2. Column, from the side. 3. Column, from the back. 4. Labellum, from below. 5. Labellum, from above. 6. Glands of the disc. 7. Glands at the base of the labellum. 8. Top of column, from the side. 9. Top of column, from the front. 10. Pollen-masses. 11. Column and labellum, showing how a fly is impelled against the stigma by the upward spring of the labellum.

Genus *Coelandria*. (*Fitzgerald.*)

THE genus *Dendrobium* cannot I think be made to include the plant which I have consequently named *Coelandria* ("*Smillie*"). The habit is not altogether that of *Dendrobium*, the leaves being more numerous and thin, the short axillary racemes, on a thick peduncle, are not those of a *Dendrobium*, and the labellum and column are altogether distinct. In the true *Dendrobiums* the labellum will be always found to be articulate, indicative of a distinct method of fertilization. In this proposed genus it is united to the column, forming with it a nectary which contains honey (absent in all the species of *Dendrobium* I have examined). The column is not smooth throughout (as in *Dendrobium*) but deeply divided transversely. The stigma is not a chamber, but a shield within a chamber. The labellum is not shaped like that of a *Dendrobium* and is without the longitudinal raised plaits, but on the contrary has a transverse bar which fits into a transverse groove in the column, and the pollen-masses instead of being formed like grains of wheat are united into a thin hollow scale easily resolvable into four narrow hollow scales, and from this peculiarity I have named the genus. Immediately above the stigma and resting upon it, in a depression, is a soft white waxy mass (absent in *Dendrobium*) which may be considered a rostellum, and on this the concave pollinia rest, are removed with at least a portion of it if it be touched, or probably leave it, and remain in the anther, if the anther be drawn back from behind. The pollen-masses, unlike those of *Dendrobium* (which are, I believe, invariably white or yellow), are of a bright red-brown.

I have made a comparison with *Dendrobium* rather than given a description of *Coelandria*, as I have no opportunity of comparing with *C. Smillie* any of the other species which I think should probably be included with it. Among them are those named *D. agrostophyllum*, *D. viridiroseum*, *D. mohliamum* (Tab. XCI, Flora Vitiensis, page 303), from Mr. Darwin's description, and the representation of the column, &c., given in his "Fertilization of Orchids," page 139, possibly *D. chrysanthum* and probably others now included in *Dendrobium* on the collation of which the characteristics would necessarily require modification.



CÆLANDRIA — Smillia

Printed at the Surveyor General's Office Sydney N.S.W.
November 1873

Coelandria Smilliae. (Fitzgerald.)

(*Dendrobium Smilliae*, *Mueller.*)

To Sir William McArthur I am indebted for the opportunity of figuring this species, which has flowered in his orchid-house. It appears to me to be fertilized by insects in a totally distinct method from *Dendrobium*, in which as in many other genera the labellum attached by an elastic hinge acts against the weight of an insect and impels it against the stigma. In this species the labellum is included within the lower sepals (fig. 10) and adheres to the column, so as with it to form a nectary (figs. 11 and 12) in which honey is secreted. In the end of the labellum is a groove (figs. 1 and 8), and if a bristle be pushed down through this groove and gently withdrawn, the soft waxy matter (figs. 5 and 12), which rests on the stigma and on which the pollen scales lie, adheres to the bristle and removes the pollen scales, which are driven back upon the stigma by the constant pressure of the labellum or are brought away upon the bristle. In Nature this operation is, I should think, performed by the proboscis of some large moth or butterfly when probing to reach the honey at the base of the column. *Coelandria Smilliae* flowers in November, and is found in North-eastern Australia.

EXPLANATION OF PLATE.

Coelandria Smilliae. Fig. 1. Labellum, from the side, back, and front. 2. Top of column, from the front, anther raised. 3. Pollen-masses. 4. Pollen-masses on rostellum. 5. Stigma, rostellum, and pollen-masses. 6. Column, from the side. 7. Column, from the front. 8. Back of column and top of labellum. 9. Flower, from the back. 10. Flower, from the front. 11. Labellum and column, from the side. 12. Labellum and column, from the side, half of labellum and one wing of column removed.



From Nature and on Stone by R.D. Fitzgerald FLS

Dendrobioides

DIURIS

Pedunculata

Diuris pedunculata. (R. Brown.) *Diuris dendrobioides*. (Fitzgerald.)

Diuris pedunculata varies much in habit, being sometimes very slender and at others robust—the one belonging apparently to the coast, the other to the interior. The flowers of the larger form are much more open than those of the slender kind, and the labellum much larger in proportion (fig. 3), the central lobe being less rhomboidal; but the pubescence of the labellum easily distinguishes it from all other species. *D. laevis* (which I discovered in Western Australia) is the nearest allied, but differs from it specially in the smoothness of the labellum and the spiral form of the leaves. In one specimen of *D. pedunculata*, found at Deniliquin, the pollen-masses were attached to the back of the stigma close to the rostellum (fig. 4), and this plant would thus no doubt have produced seed without the removal of the pollinia, or pollen being placed upon the front of the stigma. This single instance shows that in some cases *Diuris* may be self-fertilized by contact of the back or edge of the stigma with the pollen of the same flower, and the relationship is established with *Orthoceras*, in which genus fertilization always takes place by contact of the pollen-masses with the back of the stigma, close to the rostellum. *D. pedunculata* is generally but not numerously distributed in New South Wales; it grows in stiff clay, and flowers in September and October.

Diuris dendrobioides may not be considered an established species, as I only found two plants at Cunningham's Plains, near Murrumburrah, and Mr. A. G. Hamilton has obtained what he considered to be the same plant at Guntawang, near Mudgee. The two plants observed by me grew close together in a field, where numbers of *D. elongata* and *D. pedunculata* were in flower, and they may have originated from a cross between the two species. They had, however, some characters very distinct from both, such as the breadth, shortness, and colour of the lower sepals. They are, I think, worthy of a figure and a name, whether others are found elsewhere or not. If not, it is very interesting as an example of a very distinct form, of which two examples at least have existed, and which, if it could establish itself and become numerous, would undoubtedly be considered a species.

The date of flowering was 2nd of October.

DESCRIPTION OF *DIURIS DENDROBIOIDES*.

Rather stout, about ten inches high. Leaves, three or four at the base of the stem, linear-oblong, obtuse, three or four inches. Flowers (resembling those of a *Dendrobium* rather than a *Diuris*), four or five, dark red-brown, with light edges. Petals about eight lines, oblong, undulate, broadly stipitate. Dorsal sepal broad, undulate, embracing the column, about five lines long. Lateral sepals petal-like, dark red-brown, broadly lanceolate, acute, about one inch. Labellum three-lobed from the base, the lateral lobes broadly cuneate, denticulate at the ends. Central lobe linear at the base, but suddenly expanded at half its length; lower part broadly triangular, with revolute edges and a raised line along the centre. Two raised plates on the linear part of the labellum bent towards the central raised line, which extends to half their length. Wings of the column denticulate, shorter than the anther.

EXPLANATION OF PLATE.

Diuris pedunculata. Fig. 1. Labellum, from the front. 2. Labellum, from the side. 3. Labellum (natural size), from robust form. 4. Stigma, showing pollen-mass adhering to the left lobe. 5. Column, from the front. 6. Column, from the back. 7. Column, from the side, anther drawn back.

Diuris dendrobioides. Fig. 1. Labellum, from the side. 2. Labellum, from the front. 3. Column, from the back. 4. Column, from the front. 5. Pollen-masses.



From Nature by R. D. Stanger, F.L.S.

On Stone by Arthur J. Stoppel

DIPODIUM Punctatum.

Genus *Dipodium*. (R. Brown.)

THIS genus is intermediate between the epiphytes and terrestrial orchids; the form of the column, the anther, pollen-masses, and labellum, being those of the former—the habit that of the latter.

It is in Australia a small genus, two only being known, but, as might be expected from its approach to the epiphytes, it is also found (according to Benthams) in New Caledonia, Eastern Archipelago, and East Indies, and like the epiphytes is dependent on insects for its fertilization.

Dipodium punctatum. (R. Brown.)

THIS orchid is known by many local names, such as "native hyacinth," "spotted lily," &c., and is frequently to be seen in the hands of Christmas holiday-makers, who cannot fail to notice its spike of spotted flowers growing leafless from the baked ground, at the foot of some gnarled gum-tree—almost the only flower in that dry season, and all the more remarkable for the specially barren situation it elects to grow in. *Dipodium punctatum* is probably a parasite on the roots of trees; but it is very difficult to determine absolutely whether tubers such as those of this orchid really derive nourishment from or have been nourished by the roots of other plants or trees, or have merely grown in juxtaposition and adapted themselves to them as they do to stones in gravelly situations. Among the orchids, respecting which it would be interesting to ascertain whether they are always or have been at an early stage parasitical, are *Gastrodia*, *Galeola*, and *Prasophyllum flavum*, and among other Australian families the Western Australian *Nuytsia*, and *Atkinsonia* of New South Wales.

The light greenish form (fig. B) is from specimens kindly sent to me from Guntawang, near Mudgee, by my friend A. G. Hamilton. It may possibly be *D. squamatum*, referred to (in a note) by Benthams in the *Flora Australiensis*, as from New Caledonia, and differing from *D. punctatum* "chiefly in the more closely imbricate, appressed, and acute scales, at the base of the stem," but I have never seen a specimen of the New Caledonian plant. *D. punctatum* is distributed over the whole coast country of Australia, with the exception probably of Western Australia, and flowers, as previously stated, in December.

EXPLANATION OF PLATE.

A. *Dipodium punctatum*. Fig. 1. Seed capsules, part of one removed. 2. Column and part of perianth. 3. Labellum, from the front. 4. Top of column. 5. Top of column, anther and pollen-masses removed. 6. Pollen-masses.

B (possibly *Dipodium squamatum*). Fig. 1. Column, from the side and front. 2. Labellum, from the front, and column, from the back. 3. Labellum and column, from the side.





Illustrated by E. D. Fitzgerald, F.L.S. On Stone by Arthur J. Sharps

DENDROBIUM Phalaenopsis

Printed at the Surveyor General's Office, Sydney, N.S.W.
December 1886

Dendrobium phalaenopsis. (Fitzgerald.)

THIS beautiful Dendrobium has been imported by Captain Broomfield, and flowered in his green-house. It is a splendid addition to the charming lilac Dendrobs procured within the last few years from Northern Australia and New Guinea. It is closely allied to *D. bigibbum*, *D. superbiens*, and *D. Goldii*. It is easily distinguished from *D. bigibbum* by the absence of the convex form in the flowers—of the cluster of white glands on the disk of the labellum—of the emarginate termination of the labellum—and the drooping carriage of the flowers; from *D. superbiens* by the broadness of the parts of the perianth, and the sepals not being obtuse or undulate, and the absence of ridges or plates on the labellum, which in *D. superbiens* are similar to those in *D. undulatum*, which *D. superbiens* resembles in all but colour. It is also by no means so robust a plant as *D. superbiens*. *D. Goldii*, of New Guinea, appears from the figure in the "Garden" (Sep. 14, 1878, No. 356)—for I have seen no description—to be unlike it in the form of the labellum, the narrowness of the parts of the perianth, the drooping habit of the flowers, length of spikes, form of the leaves, and banded stems. I have given this finest of the Australian Dendrobs the name of *phalaenopsis* from the likeness of its flowers to moths and also its likeness to the genus *Phalaenopsis*, the flowers having a strong resemblance to those of that genus. It was obtained in Northern Queensland, and flowers in April. (The plant from which the description was taken has again flowered, producing three hundred flowers.)

DESCRIPTION (*published in the Gardener's Chronicle of 10 July, 1880, Vol. XIV, No. 341*).

Stems about twenty inches, slightly contracted towards the base. Leaves, about eight or ten on the upper eight inches of the stem, lanceolate, reaching five inches. Racemes at least half the length of the stems, terminal on peduncles of about ten inches. Flowers, about fifteen, on pedicels of about one inch, lilac, two inches to two and a half across. Sepals, lanceolate, acute, one inch long and about five lines broad. Petals obovate, acute, one inch broad. Labellum one inch long, acute, with broad wings meeting over the column-base, forming at the hinge a second spur which reaches half an inch and is curved and compressed at the sides. No calli or plates on the labellum, which is only slightly ridged at the base. Pollen-masses more concave than is general in the genus.

EXPLANATION OF PLATE.

Fig. 1. Flower and buds. 2. Pollen-masses. 3. Labellum and column, from the side. 4. Labellum, from above and from the point. 5. Column, from the side. 6. Labellum, from the front.



From Nature and on Stone by R.D. Fitzgerald FLS

DENDROBIUM Beckleri

Printed at the Surveyor General's Office Sydney N.S.W.
June 1881



Dendrobium Beckleri. (Mueller.)

THERE is some confusion with respect to *Dendrobium Beckleri* (Mueller), *D. Mortii* (Mueller), and *D. Boemanii* (Bentham), but as specimens I obtained at the Macleay River, and which are referred to in the *Flora Australiensis* as *D. Mortii*, were considered by Baron Mueller to be *D. Beckleri* as named by him, and as they agree with the description of that species, I am compelled to differ from the "Flora" in attaching the name of *Beckleri* to the figure, which is taken from the plant collected on the Macleay, and from which the flowers were originally sent to Baron Mueller. A leading distinction between this species and *D. Mortii* (of which I believe *D. Boemanii* is but a synonym) is that *D. Mortii* produces its smaller flowers in pairs, the peduncles being two-flowered. *D. Beckleri* grows occasionally on rocks, but more frequently on the topmost branches of "oaks" (*Casuarina glauca*) which stand in the beds of creeks, or of the densely crowded white-stemmed brush timbers of the "cedar scrubs" on alluvial flats and river banks. Its long straggling branches are often four feet long. Like most of our Dendrobs its flowers are sweet-scented, and are produced in November.

EXPLANATION OF PLATE.

Dendrobium Beckleri. Fig. 1. Labellum, from the back. 2. Labellum, from the front. 3. Column, from the front, with part of perianth, (labellum removed).



From Nature by R. D. R. (erak) F.L.O.

On Stone by Arthur J. Stoppel.

Parviflora

PTEROSTYLIS

Barbata

Printed at the Surveyor General's Office Sydney NSW
August 1879.



Pterostylis parviflora. (R. Brown.) *Pterostylis barbata*. (Lindley.)

Pterostylis parviflora has numerous flowers, as in the section in which the labellums are excluded, but in it the labellum is included, and is much smaller in proportion to the size of the flowers than is generally the case—as is also the column. I believe that there is no real distinction between *P. parviflora* and *P. aphylla*. The principal difference between them would, according to the descriptions, appear to be that in the latter the flowers turn towards each other, but I think the distinction is not constant. The specimen from which the figure was taken grew at Bowenfels, but a smaller and greener form (which is I believe *P. aphylla*) is common on the Blue Mountains. Both are sometimes without radical leaves, and at others an offshoot from the base of the flower-stem produces leaves, and in both the flowers are generally turned towards each other, especially in the small green variety. *P. parviflora* flowers in March, and grows in swampy or wet flats on the mountains. I have found it at one place only near Sydney, at Long Bay, near Coogee.

Pterostylis barbata. This species should have been figured with *P. turfosa* of Western Australia rather than with *P. parviflora*, but when the drawing was made I had little expectation of obtaining that species. *P. barbata* has lost, or never developed, sensitiveness in the labellum, and in what way (if any) it assists in the fertilization of the plant I have not been able to discover. It may be that its likeness to an insect is in some way attractive. This is the only Australian species of *Pterostylis* extending into New Zealand, where it is very rare. A solitary plant, which I found on the summit of a hill at Cootamundra, is, I believe, the first procured in New South Wales, though it has been obtained in Victoria, South Australia, Western Australia, and commonly in Tasmania. It flowers in October.

EXPLANATION OF PLATE.

Pterostylis parviflora. Fig. 1. Column, from the front. 2. Top of column, wings removed. 3. Top of column, from the side, one wing removed. 4. Column, from the side. 5. Flower, from the back. 6. Flower, from the front. 7. Labellum, from the side. 8. Flower, torn open, showing proportion of column to perianth. 9. Column and labellum, from the side. 10. Pollen-masses. 11. Flower, from the side.

Pterostylis barbata. Fig. 1. Labellum, from the front. 2. Top of labellum, from the side. 3. Labellum and lower sepals, from the side. 4. Stigma and part of column. 5. Column, from the side. 6. Column, from the front. 7. Column, from the side, one wing removed. 8. Pollen-masses.



From Nature by R. D. R. (exhib. F.L.S.)

On Stone by Arthur J. Searles

CALADENIA

Arenaria

Concolor



Caladenia arenaria. (Fitzgerald.) Caladenia concolor. (Fitzgerald.)

Caladenia arenaria is the "spider orchid" of the Edwards, Murrumbidgee, Yanko, and Columbo Rivers, where it is to be found growing on the sand-hills among the pines (*Frenela robusta*). It is conspicuous from the large size of the flowers and their grey colour. It flowers in September.

Caladenia concolor I have only obtained from the granite hills near Albury, and it is very remarkable for the darkness and uniformity of colour of the flower and stem. The edges of the labellum are much more acutely divided than in *C. arenaria*, and the column much narrower and simpler in form. It flowers in October.

DESCRIPTION.

Caladenia arenaria. A rather robust species, about one foot high. Leaf, oblong-linear, hairy, about six inches. Flowers, one or two, of a light grey colour. Sepals about three inches long, dilated at the base and tapering into a fine point. Dorsal sepal erect. Petals similar to sepals but shorter, about two inches. Labellum, without lobes, about nine lines long and five broad (on a rather long claw), lanceolate, recurved, the edges for about four-fifths of their length from the point crenate, the points being almost clavate. Calli of the labellum linear, bent forward, in four rows or six rows, near the base. Column about seven lines, curved, winged from above the base of the anther to the ovary. The upper part of the wings broad and undulate. Two small globular glands at the base of the column. Point of the anther short.

Caladenia concolor. A rather robust species, hardly one foot high. The flower and stems of a uniform dark prune colour. At least generally one-flowered, sepals and petals about two inches, dilated at the base and tapering to a fine point. Labellum without lobes, about seven lines long and four broad, lanceolate, recurved, the edges for about four-fifths from the point acutely serrate. Calli of the labellum linear, bent forward in four rows, or near the base six rows. Column slightly curved, winged from below the anther to the base, narrower and of more uniform breadth than in *C. arenaria*. Two large globular glands at the base of the column.

EXPLANATION OF PLATE.

Caladenia arenaria. Fig. 1. Labellum, from the back. 2. Labellum, from the side. 3. Labellum, from the front. 4. Calli of the labellum. 5. Column, from the side. 6. Column, from the back and front. 7 and 8. Pollen-masses. 9. Top of column, from the front.

Caladenia concolor. Fig. 1. Column, from the back. 2. Column, from the front. 3. Labellum, from the back. 4. Labellum, from the side. 5. Labellum, from the front. 6. Calli of the labellum. 7. Column, from the side.



CALADENIA filamentosa

ACIANTHUS Caudatus

Caladenia filamentosa. (R. Brown.) Acianthus caudatus. (R. Brown.)

THIS *Caladenia* is easily distinguished from the other "spider orchids" by its having only two rows of flat-topped calli on the labellum, which resemble the soles of stocking feet. Dr. Woolls sent me specimens from Mudgee, but I have never seen it in New South Wales. In Western Australia it is very common, and has there a peculiarity of growing in clumps which does not belong to members of the genus except those of Western Australia, where many of the orchids spring from roots chained or strung together. This union of many individuals by a connection of their tubers, or rather this production of many united tubers or bulbs from which numerous flower-stems spring, may have originated in the benefit such union would afford in preventing desiccation in a country subject to drought. In the case of this species I have counted forty-two flower-stems which had their bulbs all united together and entangled in one mass. The habit adds much to the beauty of the species which possess it, as the flowers are brought together in pretty bunches. *Caladenia filamentosa* flowers in August.

Acianthus caudatus is figured with *Caladenia filamentosa*, in order to show the distinctions between the two closely allied genera by contrasting the most similar species. *Acianthus caudatus* is a rare orchid in the neighbourhood of Sydney, and appears to be rarer than it is, from the infrequency of its flowering. It is rather a mountain than a coast species, being very common on the Kurrajong and other parts of the Blue Mountains, probably on account of the lower temperature, as it is common in Tasmania. It flowers in August, though its congeners flower in the beginning of the winter (March and April), and it is to be found when near the coast in damp fissures in rocks, but in the mountains in shady forest.

EXPLANATION OF PLATE.

Caladenia filamentosa. Fig. 1. Top of column, from the front. 2. Top of column, from the side, two pollen-masses removed. 3. Labellum, from the front. 4. Labellum, from the back. 5. Pollen-masses. 6. Column, from the side. 7. Column, from the front. 8. Calli of the labellum. 9. Column and labellum, from the side.

Acianthus caudatus. Fig. 1. Flower, from the side. 2. Top of column, valves of the anther turned back, showing pollen-masses. 3. Top of column, from the front and side. 4. Column and labellum, from the front, with part of perianth.



From Nature by R.D. Fitz Gerald FLS

On Stone by Arthur J. Stoppe

DENDROBIUM Moorei

Printed at the Surveyor General's Office Sydney N.S.W.
October 1880.



Dendrobium Moorei. (Mueller.)

THIS pretty Dendrobium, though very like *D. Kingianum* in habit, differs from all other Australian forms in its long nectary or spur and very peculiar petal-like labellum, which, unlike that of other species, is devoid of plates or glands and possessed of pointed lobes on the edges. It was named by Baron Mueller, in honor of C. Moore, Director of the Botanical Gardens, Sydney, from specimens I procured on the mountains at Howe's Island, in 1869, where I again obtained it in 1877. It does not belong to the low grounds of the island (to which it is peculiar), but clings to the precipices in the mountains and the mossy branches of trees which hang over the cliffs. When seen adhering to the black basalt of the chasms, the white waxy flowers, more like white hyacinths than orchids, make a beautiful contrast to the wildness of the scene. In the low grounds it is replaced by *D. gracilicaule*. It flowers in June and July.

EXPLANATION OF PLATE.

Dendrobium Moorei. Fig. 1. Top of column, from the front. 2. Top of column, from the side. 3. Labellum, from the side and front. 4. Flower, from the front (natural size). 5. Flower, from the front. 6. Column, from side and front. 7. Pollen-masses in anther, and pollen-masses.

PART 1.

JULY, 1875.

PART 2.

MARCH, 1876.

PART 3.

JUNE, 1877.

PART 4.

JULY, 1878.

PART 5.

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PART 6.

JULY, 1880.

PART 7.

OCTOBER, 1882.



